Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

21. (currently amended) A performance evaluation method for a plasma processing apparatus comprising:

where the plasma processing apparatus which is disassembled before transfer, is transported to a customer, and is reassembled at a customer site, the plasma processing apparatus comprising: including a plasma processing chamber including a plasma excitation electrode for exciting a plasma; a radiofrequency feeder, the plasma excitation electrode being connected to the output end of the radiofrequency feeder; a radiofrequency generator for supplying a radiofrequency voltage to the plasma excitation electrode; and a matching circuit having an input terminal and an output terminal, the input terminal being connected to the radiofrequency generator and the output terminal being connected to the input end of the radiofrequency feeder so as to achieve impedance matching between the plasma processing chamber and the radiofrequency generator, the method comprising:

determining that the plasma processing apparatus maintains a required level of performance when a loss capacitance C_{X1} of the plasma processing chamber after the delivery is less than 26 times a plasma electrode capacitance C_{e1} and that the plasma processing apparatus does not maintain the required level of performance when the loss capacitance C_{X1} is not less than 26 times the plasma electrode loss capacitance C_{e1}, wherein the loss capacitance C_{X1} is measured between the plasma excitation electrode and ground potential positions which are DC-grounded and the plasma electrode capacitance C_{e1} is measured between the plasma excitation electrode and a counter electrode which generate a plasma in cooperation with each other.

22. (currently amended) A performance evaluation method for a plasma processing apparatus comprising:

where the plasma processing apparatus which is disassembled before transfer, is transported to a customer, and is reassembled at a customer site, the plasma processing apparatus comprising: including a plurality of plasma processing chambers including plasma excitation electrodes for exciting plasma; radiofrequency feeders, each plasma excitation electrode being

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connected to the output end of the corresponding radiofrequency feeder; at least one radiofrequency generator for supplying a radiofrequency voltage to the plasma excitation electrodes; and at least one matching circuit having an input terminal and an output terminal, the input terminal being connected to the radiofrequency generator and the output terminal being connected to the input end of the radiofrequency feeder so as to achieve impedance matching between the plasma processing chambers and the radiofrequency generator, ~~the method comprising:~~

determining that the plasma processing apparatus maintains a required level of performance when a variation C_{elr}, defined by $(C_{elmax} - C_{elmin})/(C_{elmax} + C_{elmin})$, between the maximum capacitance C_{elmax} and the minimum capacitance C_{elmin} among plasma electrode capacitances C_{el} of the plurality of plasma processing chambers is less than an upper limit and that the plasma processing apparatus does not maintain the required level of performance when the variation is not less than the upper limit, wherein the plasma electrode capacitance C_{el} is measured between the plasma excitation electrode and a counter electrode which generate a plasma in cooperation with each other; and

determining that the plasma processing apparatus maintains a required level of performance when a variation C_{X1r}, defined by $(C_{X1max} - C_{X1min})/(C_{X1max} + C_{X1min})$, between the maximum capacitance C_{X1max} and the minimum capacitance C_{X1min} among loss capacitances C_{X1} of the plurality of plasma processing chambers is less than an upper limit and that the plasma processing apparatus does not maintain the required level of performance when the variation is not less than the upper limit, wherein the loss capacitance C_{X1} is measured between the plasma excitation electrode and ground potential positions which are DC-grounded.

23. (original) A performance evaluation method for a plasma processing apparatus according to claim 22, wherein both the upper limits for the variation C_{elr} and the variation C_{X1r} are 0.1.

24. (original) A performance evaluation method for a plasma processing apparatus according to claim 22, wherein both the upper limits for the variation C_{elr} and the variation C_{X1r} are 0.03.

25. (currently amended) A performance evaluation method for a plasma processing apparatus comprising:

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where the plasma processing apparatus ~~which~~ is disassembled before transfer, is transported to a customer, and is reassembled at a customer site, the plasma processing apparatus ~~comprising:~~ including a plurality of plasma processing chambers including plasma excitation electrodes for exciting plasma; radiofrequency feeders, each plasma excitation electrode being connected to the output end of the corresponding radiofrequency feeder; at least one radiofrequency generator for supplying a radiofrequency voltage to the plasma excitation electrodes; and at least one matching circuit having an input terminal and an output terminal, the input terminal being connected to the radiofrequency generator and the output terminal being connected to the input end of the radiofrequency feeder so as to achieve impedance matching between the plasma processing chambers and the radiofrequency generator, ~~the method comprising:~~

determining that the plasma processing apparatus maintains a required level of performance when a variation C_{elr}, defined by $(C_{elmax} - C_{elmin})/(C_{elmax} + C_{elmin})$, between the maximum capacitance C_{elmax} and the minimum capacitance C_{elmin} among plasma electrode capacitances C_{el} of the plurality of plasma processing chambers is less than an upper limit and that the plasma processing apparatus does not maintain the required level of performance when the variation is not less than the upper limit, wherein the plasma electrode capacitance C_{el} is measured between the plasma excitation electrode and a counter electrode which generate a plasma in cooperation with each other; and

determining that the plasma processing apparatus maintains a required level of performance when a variation C_{X1r}, defined by $(C_{X1max} - C_{X1min})/(C_{X1max} + C_{X1min})$, between the maximum capacitance C_{X1max} and the minimum capacitance C_{X1min} among loss capacitances C_{X1} of the plurality of plasma processing chambers is less than an upper limit and when all the loss capacitances C_{X1} are less than 26 times the plasma electrode capacitance C_{el} and that the plasma processing apparatus does not maintain the required level of performance when the variation is not less than the upper limit or when one of the loss capacitances C_{X1} is not less than 26 times the plasma electrode capacitance C_{el}, wherein the loss capacitance C_{X1} is measured between the plasma excitation electrode and ground potential positions which are DC-grounded.

26. (original) A performance evaluation method for a plasma processing apparatus according to claim 25, wherein both the upper limits for the variation C_{elr} and the variation C_{X1r} are 0.1.

27. (original) A performance evaluation method for a plasma processing apparatus according to claim 25, wherein both the upper limits for the variation C_{e1r} and the variation C_{X1r} are 0.03.

28. (currently amended) A performance evaluation method for a plasma processing system ~~comprising:~~ comprising:

~~where the plasma processing system which~~ where the plasma processing system ~~which~~ is disassembled before transfer, is transported to a customer, and is reassembled at a customer site, the plasma processing system ~~comprising~~ including a plurality of plasma processing apparatuses, each ~~comprising:~~ including a plasma processing chamber including a plasma excitation electrode for exciting a plasma; a radiofrequency feeder, the plasma excitation electrode being connected to the output end of the radiofrequency feeder; a radiofrequency generator for supplying a radiofrequency voltage to the plasma excitation electrode; and a matching circuit having an input terminal and an output terminal, the input terminal being connected to the radiofrequency generator and the output terminal being connected to the input end of the radiofrequency feeder so as to achieve impedance matching between the plasma processing chamber and the radiofrequency generator, ~~the method comprising:~~

determining that the plasma processing system maintains a required level of performance when a variation C_{e1r}, defined by $(C_{e1max} - C_{e1min})/(C_{e1max} + C_{e1min})$, between the maximum capacitance C_{e1max} and the minimum capacitance C_{e1min} among plasma electrode capacitances C_{e1} of the plurality of plasma processing apparatuses is less than an upper limit and that the plasma processing system does not maintain the required level of performance when the variation is not less than the upper limit, wherein the plasma electrode capacitance C_{e1} is measured between the plasma excitation electrode and a counter electrode which generate a plasma in cooperation with each other; and

determining that the plasma processing system maintains a required level of performance when a variation C_{X1r}, defined by $(C_{X1max} - C_{X1min})/(C_{X1max} + C_{X1min})$, between the maximum capacitance C_{X1max} and the minimum capacitance C_{X1min} among loss capacitances C_{X1} of the plurality of plasma processing apparatuses is less than an upper limit and that the plasma processing system does not maintain the required level of performance when the variation is not less than the upper limit, wherein the loss capacitance C_{X1} is measured between the plasma excitation electrode and ground potential positions which are DC-grounded.

29. (original) A performance evaluation method for a plasma processing system

according to claim 28, wherein both the upper limits for the variation C_{e1r} and the variation C_{X1r} are 0.1.

30. (original) A performance evaluation method for a plasma processing system according to claim 28, wherein both the upper limits for the variation C_{e1r} and the variation C_{X1r} are 0.03.

31. (currently amended) A performance evaluation method for a plasma processing system comprising:

where the plasma processing system ~~which~~ is disassembled before transfer, is transported to a customer, and is reassembled at a customer site, the plasma processing system ~~comprising~~ including a plurality of plasma processing apparatuses, each ~~comprising:~~ including a plasma processing chamber including a plasma excitation electrode for exciting a plasma; a radiofrequency feeder, the plasma excitation electrode being connected to the output end of the radiofrequency feeder; a radiofrequency generator for supplying a radiofrequency voltage to the plasma excitation electrode; and a matching circuit having an input terminal and an output terminal, the input terminal being connected to the radiofrequency generator and the output terminal being connected to the input end of the radiofrequency feeder so as to achieve impedance matching between the plasma processing chamber and the radiofrequency generator, ~~the method comprising:~~

determining that the plasma processing system maintains a required level of performance when a variation C_{e1r}, defined by $(C_{e1max} - C_{e1min})/(C_{e1max} + C_{e1min})$, between the maximum capacitance C_{e1max} and the minimum capacitance C_{e1min} among plasma electrode capacitances C_{e1} of the plurality of plasma processing apparatuses is less than an upper limit and that the plasma processing system does not maintain the required level of performance when the variation is not less than the upper limit, wherein the plasma electrode capacitance C_{e1} is measured between the plasma excitation electrode and a counter electrode which generate a plasma in cooperation with each other; and

determining that the plasma processing apparatus maintains a required level of performance when a variation C_{X1r}, defined by $(C_{X1max} - C_{X1min})/(C_{X1max} + C_{X1min})$, between the maximum capacitance C_{X1max} and the minimum capacitance C_{X1min} among loss capacitances C_{X1} of the plurality of plasma processing chambers is less than an upper limit and when all the loss capacitances C_{X1} are less than 26 times the plasma electrode capacitance C_{e1} and that the plasma processing apparatus does not maintain the required level of performance

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when the variation is not less than the upper limit or when one of the loss capacitances C_{X1} is not less than 26 times the plasma electrode capacitance C_{e1}, wherein the loss capacitance C_{X1} is measured between the plasma excitation electrode and ground potential positions which are DC-grounded.

32. (original) A performance evaluation method for a plasma processing system according to claim 31, wherein both the upper limits for the variation C_{e1r} and the variation C_{X1r} are 0.1.

33. (original) A performance evaluation method for a plasma processing system according to claim 31, wherein both the upper limits for the variation C_{e1r} and the variation C_{X1r} are 0.03.

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